**Chemistry Energy and Chemical Change (Chapter 15 Outline)**

***AS YOU READ, RESPOND TO THE FOLLOWING:***

*Vocabulary*: **Define in your own words**

Law of conservation of energy-

Chemical potential energy-

Heat-

Calorie-

Joule-

Specific heat-

Calorimeter-

Thermochemistry-

System-

Universe-

Entropy-

Free energy-

Respond to the prompts below:

What is energy? Explain. (2 pts)

How do potential and kinetic energy differ? Explain. (2 pts)

How is the amount of heat absorbed or released by a substance calculated as its temperature changes? Define the variables in the equation (2 pts)

What do enthalpy and enthalpy change mean in terms of chemical reactions and processes? Explain. (3 pts)

How is energy lost or gained during changes of state? Explain how change in state of matter pertains to energy loss or gain. (3 pts)

What is the equation used to calculate heat that is absorbed or released in a chemical reaction. Define each variable. (2 pts)

How is Hess's law applied to calculate the enthalpy change for a reaction? Explain. (2 pts)

What is the difference between spontaneous and non-spontaneous processes? Explain. (2 pts)

***ABOUT THE READING:***

Write three things that you learned about Energy*:*

***Make sure to write a full sentence.***

*Example: I learned that specific heat is a measure of a substance's ability to resist change in temperature.*

*1.*

*2.*

*3.*

***Assigned work****: Chapter 15 assessment, problems #62-64, 74-75, 84-85, 93, 99*